HOT-76: Chief Scientist Report

Chief Scientist: L. Tupas

Loading: Sept. 27, 1996
Departed: Sept. 30, 1996 at 0910
Returned: Oct. 4, 1996 at 0630
Vessel: R/V Moana Wave

Chief Scientist: Dr. Louie Tupas
Master: Captain John Stahl
Deck Operations: Mr. Luigi Pozzi
Electronics Tech: Mr. Will Hervig

1. SCIENCE PERSONNEL

Dale Hebel - UH, JGOFS
Luis Tupas - UH, JGOFS
Lance Fujieki - UH, JGOFS
Terrence Houlihan - UH, JGOFS
Dan Sadler - UH, JGOFS
Jefrey Snyder - UH, WOCE
Craig Nosse - UH, WOCE
Molly Lucas - UH, WOCE
Michael Guidry - UH, WOCE
Christopher Winn - UH, Carbon Project
Stephanie Christensen - UH, Zooplankton/Pigment Project
Mai Lopez - SIO, OPC
Tomoe Uehara - UH, Grad Student
Stuart Donachie - UH, Postdoc
Beth Holmes - UH, Postdoc

2. GENERAL SUMMARY

All objectives of the JGOFS and WOCE programs were accomplished. All planned stations were occupied. All core samples were taken and the 36 hour CTD burst sampling period was not interrupted. All net tows accomplished. All samples for ancillary projects were taken. Floating sediment trap array and primary production array deployed and recovered successfully. No samples were lost during the in-situ incubations. ADCP measurements were made throughout the cruise. The pCO2 system worked using the ships uncontaminated seawater intake system. The optical plankton counter was towed around Station ALOHA, however, the submersible pump did not function.

3. R/V MOANA WAVE, OFFICERS AND CREW, TECHNICAL SUPPORT

The R/V Moana Wave continues to maintain the excellent ship support for our work. The officers and crew were most helpful and accommodating. They showed enthusiasm and concern for our work and were very flexible in receiving changes in our operational schedule. Technical support during this cruise was excellent. STAG personnel were available at any time to assist in our work and made things much easier for us.

4. DAILY REPORT OF ACTIVITIES

September 27, 1996; Loading Day

All deck and lab equipment were moved from either SNUG Harbor labs or UH on this day. All electrical and electronic connections were made for the CTD and the OPC/CWS. All lab equipment were stowed away and secured. All laboratory instruments and computers were tested and appeared functioning. No problems were encountered.

September 30, 1996

All hands arrived on ship by 0845. Ship departed at 0910. Fire and emergency drills conducted at 0940 followed by a safety briefing by the chief mate and a short science meeting. Arrived at Station Kahe at 1200. Conducted weight cast followed by a light cast using the Profiling Reflectance Refractometer. A 1000 m CTD cast completed the operations. Started transit to Station ALOHA at 1600 following a depth contour of about 500 meters for ADCP bottom tracking. Uncontaminated seawater system was run and the pCO2 system was connected and operated. Ammonium flow through analysis system attached to clean seawater intake by T. Uehara. Arrived at Station ALOHA at 2235. Deploy floating sediment trap array at 0000, accomplished at 0030 on October 1.

October 1, 1996

Sediment trap operations completed at 0030. A zooplankton net tow was conducted at 0045. Ship transited to center of station and commenced WOCE deep cast at 0145. Cast was completed at 0500. CTD burst sampling commenced at 0800 and maintained at 3 hour intervals. Noon zooplankton tows successful. Noon PRR cast was successful. One night tow was accomplished.

October 2, 1996

CTD casts continued at 3 hour intervals. Go-Flo cast conducted at 0130. Primary production array deployment commenced at 0430. CTD casts continued at 3 hour intervals. Zooplankton tows conducted at noon. PRR cast at 1330. Retrieval of primary production array commenced at 1830. No samples were lost. CTD casts continued at 3 hour intervals. One night tow was accomplished. Last 1000 meter cast conducted at 2300.

October 3, 1996

Transit outside the circle to pump holding tanks and dump trash. Return to northeast corner to commence OPC tow at 0300. Submersible pump was tested but did not function. OPC retrieved at 1200. Transit to retrieve sediment traps. Traps retrieved at 1500. Transit to Kauai Basin. Deep CTD cast started at 1630, accomplished at 1945. Returning to Snug Harbor.

October 4, 1996

Arrived at Snug Harbor at 0630. Proceeded with unloading however the majority of the lab equipment remains onboard for the next cruise. Deck winches taken off to make room for sediment trap recovery operations. Unloading completed at 1030.

ANCILLARY INVESTIGATIONS

1. Ectoenzymes - S. Donachie
2. Air-sea ammonium flux - T. Uehara
3. Methane sampling - B. Holmes

SAMPLES TAKEN FOR OTHER INVESTIGATORS

1. DIC water samples for C.D. Keeling, SIO-UCSD
2. DIC water samples for P. Quay, UW
3. Particulate samples for H. Thierstein, ETH-Zurich
4. Surface seawater for C. Measures, UH